

**WHAT IS CLAIMED IS:**

1. A process of isolating an ergot alkaloid from ergot, the process comprising: extracting ergot with a mixture, comprising: toluene and ethanol to form a primary extract.
2. The process of Claim 1, wherein the mixture, comprises: toluene and about 5-30% (v/v) of ethanol.
3. The process of Claim 2, wherein the mixture, comprises: toluene and about 10-20% (v/v) of ethanol.
4. The process of Claim 2, wherein the extracting is performed at a temperature of about 20-50°C.
5. The process of Claim 4, wherein the extracting is performed at a about ambient temperature.
6. The process of Claim 2, wherein the extracting is performed in a counter current way on a battery of percolators or on a continuous extractor.
7. The process of Claim 2, further comprising: extracting the primary extract with an aqueous solution of an acid to transfer the ergot alkaloid from the primary extract to an aqueous extract.
8. The process of Claim 7, wherein the aqueous solution of an acid is an aqueous solution of hydrochloric acid.
9. The process of Claim 8, wherein the aqueous solution of hydrochloric acid, comprises: about 30-60% (v/v) water, about 70-40% (v/v) ethanol, and about 0.05-1.0% (w/w) HCl.

10. The process of Claim 9, wherein the aqueous solution of hydrochloric acid, comprises: about 40-50% (v/v) water, about 60-50% (v/v) ethanol, and about 0.1-0.3% (w/w) HCl.
11. The process of Claim 8, further comprising: increasing the pH of the aqueous extract to above 7.0.
12. The process of Claim 11, wherein the increasing is performed by the addition of an aqueous sodium hydroxide solution (w/w).
13. The process of Claim 12, wherein the increasing is performed by the addition of a 5% aqueous sodium hydroxide solution (w/w).
14. The process of claim 11, further comprising: extracting the aqueous extract having a pH above 7.0 with toluene to transfer the ergot alkaloid from the aqueous solution and obtain a purified toluene extract.
15. The process of claim 14, further comprising: partially evaporating the solvent from the purified toluene extract to form crystalline ergot alkaloid.
16. The process of Claim 15, further comprising: separating the crystalline ergot alkaloid from the remaining toluene.
17. The process of Claim 15, further comprising: adding one or more C<sub>5</sub>-C<sub>8</sub> aliphatic hydrocarbons to the concentrate after partial evaporation of toluene to aid in crystallizing the ergot alkaloid.
18. The process of Claim 17, wherein the one or more aliphatic C<sub>5</sub> - C<sub>8</sub> hydrocarbons are selected from hexane and heptane.
19. The process of Claim 18, wherein the one or more aliphatic C<sub>5</sub> - C<sub>8</sub> hydrocarbons is hexane.

20. The process of Claim 17, further comprising: separating the crystalline ergot alkaloid from the toluene/aliphatic hydrocarbon mixture.
21. The process of Claim 20, comprising isolating the crystalline ergot alkaloid in greater than 90% purity.
22. A process of isolating an ergot alkaloid from ergot, the process comprising:
- a. extracting ergot with a mixture, comprising: toluene and ethanol to form a primary extract, wherein the mixture, comprises: toluene and about 5-30% (v/v) of ethanol;
  - b. extracting the primary extract with an aqueous solution of an acid to transfer the ergot alkaloid from the primary extract to an aqueous extract;
  - c. increasing the pH of the aqueous extract to above 7.0;
  - d. extracting the aqueous extract having a pH above 7.0 with toluene to transfer the ergot alkaloid from the aqueous solution and obtain a purified toluene extract;
  - e. partially evaporating the solvent from the purified toluene extract to form crystalline ergot alkaloid; and,
  - f. separating the crystalline ergot alkaloid from the remaining toluene..
23. A process of isolating an ergot alkaloid from ergot, the process comprising:
- a. extracting ergot with a mixture, comprising: toluene and ethanol to form a primary extract, wherein the mixture, comprises: toluene and about 5-30% (v/v) of ethanol;
  - b. extracting the primary extract with an aqueous solution of an acid to transfer the ergot alkaloid from the primary extract to an aqueous extract;
  - c. increasing the pH of the aqueous extract to above 7.0;

- d. extracting the aqueous extract having a pH above 7.0 with toluene to transfer the ergot alkaloid from the aqueous solution and obtain a purified toluene extract;
- e. partially evaporating the solvent from the purified toluene extract to form crystalline ergot alkaloid;
- f. adding one or more C<sub>5</sub>-C<sub>8</sub> aliphatic hydrocarbons to the concentrate after partial evaporation of toluene to aid in crystallizing the ergot alkaloid; and,
- g. separating the crystalline ergot alkaloid from the toluene/aliphatic hydrocarbon mixture.